USGS science for a changing world

Earthquake Shaking — Yellow Alert

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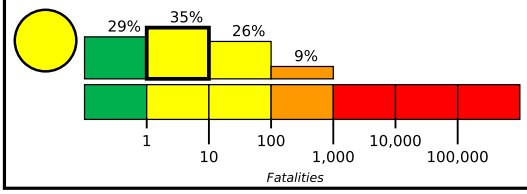
M 5.8, 26km ESE of Saray, Turkey

Origin Time: 2020-02-23 05:53:01 UTC (Sun 09:23:01 local)
Location: 38.5429° N 44.4465° E Depth: 10.0 km

PAGER Version 6

Created: 5 days, 1 hour after earthquake

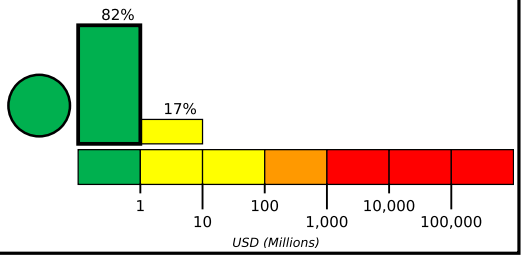
Estimated Fatalities



Yellow alert for shaking-related fatalities. Some casualties are possible and the impact should be relatively localized. Past events with this alert level have required a local or regional level response.

Green alert for economic losses. There is a low likelihood of damage.

Estimated Economic Losses



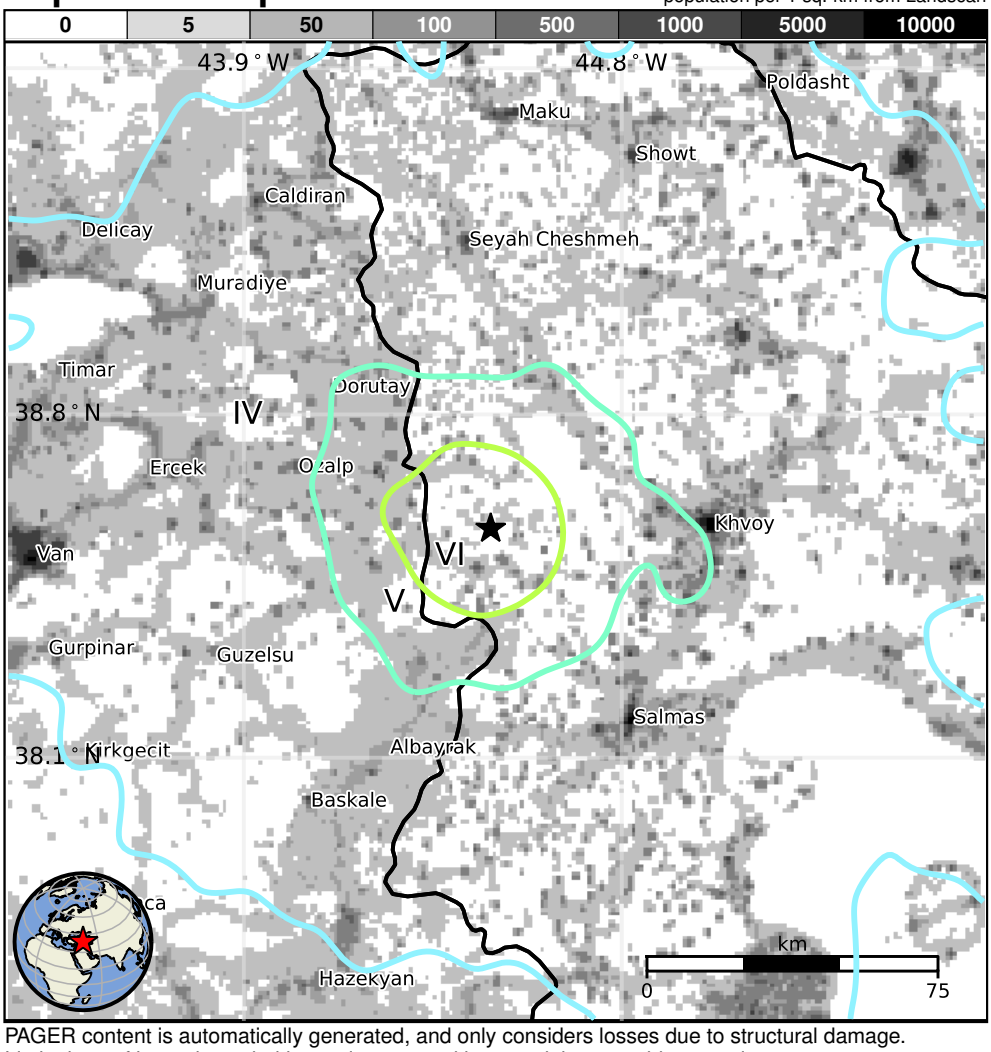
Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	156k*	1,930k	234k	25k	2k	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan



Structures

Overall, the population in this region resides in structures that are a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are adobe block and dressed stone/block masonry construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1991-07-24	218	5.5	VII(2k)	20
1977-03-25	381	5.3	VII(1k)	30
1988-12-07	265	6.7	IX(50k)	25k

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
V	Saray	<1k
V	**Ozalp**	**8k**
IV	**Khvoy**	**175k**
IV	**Salmas**	**82k**
IV	**Dorutay**	**<1k**
IV	**Albayrak**	**<1k**
IV	Qarah Zia' od Din	32k
IV	**Van**	**372k**
IV	**Baskale**	**15k**
IV	Ercis	92k
IV	Nakhchivan	65k

bold cities appear on map. (k=x1000)

https://earthquake.usgs.gov/earthquakes/eventpage/us70007v29#pager

Event ID: us70007v29